

REMARKS

Claims 11 to 25 are in the application.

Claims 1 to 10 have been deleted.

As a result of the foregoing Amendment, the specification have been provided with appropriate headings.

The claims have been rewritten to distinguish over the art of record and to set forth the claims in accordance with U.S. practice. No new matter has been added.

Reconsideration and withdrawal of the claims under 35 U.S.C. 103(a) as being unpatentable over Chiappetta et al, are respectfully requested.

It is submitted that the claims now in the application are patentable over the reference relied on by the Examiner.

The present invention is directed to a method for producing a wire cable with a core cable or core strand. The method comprises the steps prior to stranding an outer strand layer, applying an intermediate layer of a plastic material to the core cable or core strand, pressing the outer layer into the plastic material during stranding, and deforming the wire cable after

stranding of the outer strand layer to smooth its surface and/or to increase its space factor.

In accordance with the reference, a method is provided in which the outer strand layer is pressed during stranding initially only incompletely into a sheathing of thermoplastic material which surrounds the core cable. Subsequently, the cable is deformed using a cold deforming method, such as rolling and compacting or upsetting. This causes the outer strands to be pressed into the sheathing. Simultaneously, the wire sections which border at the circumference of the wire cable are flattened.

In this connection reference is made to the description of Figs. 2 and 3, particularly column 2, lines 54 to 62 and to the difference between Figs. 2 and 3. Fig. 2 shows the outer strands of the core strand to be further together, while the plastic material is being further squeezed out between the outer strands.

The present invention has as its object to provide a wire cable which has a higher space factor compared to the prior art cables.

In accordance with the present invention, the outer strand layer is pressed into the plastic material during stranding already to the finally intended extent, and the method further comprises hammering the wire cable after stranding in order to substantially deform the outer strands beyond the deformation of the wire sections at the cable circumference.

The first feature which has now been introduced into claim 11 is the fact that the outer strand layer is pressed into the plastic material during stranding already to the finally intended extent. This feature is clearly found in the description of the present application as originally filed. This feature also distinguishes the present invention over the reference.

The second feature newly added to claim 11, according to which the outer strands are substantially deformed beyond the wire sections located at the cable circumference is also disclosed in the application as originally filed, paragraph bridging pages 2 and 3. This paragraph mentions that deformation of the outer strands occurs more or less excluding those cross-sectional regions of the wire of the underside that are surrounded by the plastic and receive the counter pressure of

the plastic. In other words, everything else is being deformed. This can also be concluded from the drawing as filed.

It is submitted that this second feature also distinguishes the present invention over the reference.

The present invention as claimed is further distinguished over the prior art of record by the feature of "hammering".

The reference only mentions in column 2, lines 55 to 57 the "coat-process" known in the art, such as roller compacting or swaging. However, swaging is not hammering.

The fact that hammering can not be included or be considered as equivalent results also clearly from the fact that the reference intends to press the outer strands further into the plastic material. Hammering would not produce this effect.

Consequently, the present invention is novel over the art of record.

However, it is not only the features of the present invention that are novel but also the effects thereof.

In accordance with the reference, the wire cable is compacted

- primarily by further pressing the outer strands into the plastic material while pressing out the plastic into the spaces between the outer strands; and

- only to a small extent by flattening the wires located at the cable's circumference.

In accordance with the invention,

- the outer strands are not at all pressed further into the plastic material, and

- the entire compacting of the wire cable is achieved exclusively by compacting the outer strands.

In addition, the present invention as claimed is clearly not obvious over the art of record.

In accordance with the reference, claim 5, Fig. 3, description of Fig. 3 and column 2, lines 54ff, the outer strands are to be pressed under cold deformation of the intermediate plastic layer into this layer by "any cold-forming

process...such as roller compacting or swaging". The reference further states "this cold-formed process causes the strands 20 to be forced radially inwardly into the jacket 18...". The substantial forces required for this cold deformation results in the metal strands which are significantly harder than those of the plastic material result in only a deformation of the "crown wires". The reference states that the crown wires of the rope have been deformed slightly by the forces exerted on them during the diameter reducing process as shown at 16. The crown wires of a rope or of a strand are the wires which "collectively define the outside diameter of the rope or the strand" (column 3, lines 5 to 9).

"However, the majority of each strand 20 retains its substantially round geometry. The geometry of the core and each of its wires of strand 10 and 12 remains unchanged from its original round condition." (Column 3, lines 9 to 16)

Accordingly, the procedure disclosed in the reference seems to indicate that the substantial deformation of the outer strand layer according to the present invention cannot be achieved in the reference.

Specifically, the reference mentions that "the majority of each strands 20 retains its substantially round geometry", the

present invention is essentially looking for the opposite result.

It is submitted that the concept of the invention was clearly not obvious. Rather, the method of the invention appears to be comparable to forging a work piece not on an anvil but on a pillow.

The fact that the desired deformation is never the less achieved is primarily due to the fact that the plastic material does not have time and space to yield under the impacts of hammering. This results in a deformation of the outer strands substantially with the exclusion of those cross-sectional wire areas at the bottom side which are surrounded by the plastic material and whose counter pressure extends everywhere perpendicularly to the surface, so that there are no subjected to any deforming forces. On the upper side of the wires which are not surrounded by plastic material, directed forces occur which deform the wires. A very significant deformation of the outer strands is possible under these conditions. The intermediate plastic layer acts less to directly cushion between these wires. Rather, the conditions can be compared to an enclosed liquid in which the pressure travels in all directions, so that no significant forces occur between the intersecting wires.

Applicant submits that the above-considerations and the embodiments of the invention described in the specification demonstrate that the present invention is distinguished over the reference. In other words, the reference does not disclose or suggest

- hammering, in contrast to rolling compacting and upsetting, not only flattens the wires located at the cable's circumference and leaves the outer strands round, but the wires are deformed over the entire cross-section of the outer strands, wherein the outer strands receive a totally different cross-section which is similar to a triangular shape and an essentially closed metal surface of the wire cable is formed, as is clear from the drawing;

In addition, contrary to rolling compacting and upsetting, hammering does not press the strands into the plastic material, so that the strands are to be pressed into the plastic material already to such an extent as in the final product.

Accordingly, it is submitted that claim 1 and the remaining claims of the application are patentable over the art of record.



Therefore, in view of the foregoing, it is submitted that this application would now appear to be in condition for allowance and such allowance is respectfully solicited.

Any additional fees or charges required at this time in connection with the application may be charged to our Patent and Trademark Office Deposit Account No. 11-1835.

Respectfully submitted,

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MAILING CERTIFICATE

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on March 27, 2009.

March 27, 2009

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